Data Editing and Analysis

All questionnaires were manually edited for completeness, accuracy, legibility and validity. After the manual edit and data entry were complete, all data passed through a computer program that performed additional data checks. The errors identified by the computer edit were reviewed and the data updated accordingly. After the data were corrected, an analysis program was executed identifying extreme values that were a specified number of standard deviation from the mean of each data item. Extreme values were reviewed and original data analyzed for accuracy.

Data Summarization

The data was summarized using a combination of LXES and SAS programs. List frame equine reports were poststratified using reported equine inventory numbers. Data from usable list frame reports were summed then multiplied by their item expansion factor. An expansion factor is the value used to expand data from a sample to represent the population. For example, if 600 operations were determined to have 25 or more equine, and only 400 reported data, the expansion factor for this strata would be 600/400 = 1.5. Thus, reported data would be summed and multiplied by the expansion factor of 1.5 to calculate an estimate of the population total.

Area frame strata were summarized similar to the list frame. The data were expanded by the segment expansion factor which is simply the total number of segments in a given stratum divided by the number of segments sampled in the stratum. The area frame expansion was used for state level estimates and as a component of the multiple frame expansions.

Multiple frame expansions were utilized in estimating equine numbers. Area frame data, not included on the list frame, were expanded and added to list frame expansions to form multiple frame expansions.